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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,145

05/03/2006

Teruki Hayashida

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EXAMINER

FOGARTY, CAITLIN ANNE

ART UNIT

PAPER NUMBER

1793

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,145	Applicant(s) HAYASHIDA ET AL.	
	Examiner CAITLIN FOGARTY	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 4-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/3/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I (Claims 1 – 3) in the reply filed on December 31, 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Status of Claims

2. Claims 1 – 3 are presented for examination. Claims 4 – 6 have been withdrawn from consideration.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

4. The information disclosure statement (IDS) was submitted on May 3, 2006. This submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner. Please refer to applicant's copy of form PTO-1449 submitted herewith.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
7. Claims 1 – 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuoka et al. (US 2003/0111144).

With respect to the instant claim 1, the abstract and p. 2 paragraphs [0017] – [0019] of Matsuoka et al. disclose a hot-rolled steel sheet with an overlapping composition as seen in Table 1 below.

Table 1

Element	Instant Claim 1 (mass %)	Matsuoka et al. (mass %)	Overlapping Range (mass %)
C	0.03 – 0.15	≤ 0.15	0.03 – 0.15
Si	0.8 – 3.0	≤ 2.0	0.8 – 2.0
Mn	0.5 – 3.0	≤ 3.0	0.5 – 3.0
P	≤ 0.07	≤ 0.1	≤ 0.07
S	≤ 0.01	≤ 0.02	≤ 0.01
Al	0.015 – 0.1	≤ 0.1	0.015 – 0.1
N	0.001 – 0.008	≤ 0.02	0.001 – 0.008
Fe + impurities	Balance	Balance	Balance
Cu	---	0.5 – 3.0	---

Furthermore, Matsuoka et al. teach specific examples of stainless steel sheets that are within the instant claimed ranges in Table 1 Alloys C, D, and E and Table 4 Alloys L and M.

Regarding the instant claim 2, the abstract and p. 2 paragraphs [0017] – [0024] of Matsuoka et al. teach a hot-rolled steel sheet with an overlapping composition as seen in Table 2 below.

Table 2

Element	Instant Claim 2 (mass %)	Matsuoka et al. (mass %)	Overlapping Range (mass %)
C	0.03 – 0.15	≤ 0.15	0.03 – 0.15
Si	0.8 – 3.0	≤ 2.0	0.8 – 2.0
Mn	0.5 – 3.0	≤ 3.0	0.5 – 3.0
P	≤ 0.07	≤ 0.1	≤ 0.07
S	≤ 0.01	≤ 0.02	≤ 0.01
Al	0.015 – 0.1	≤ 0.1	0.015 – 0.1
N	0.001 – 0.008	≤ 0.02	0.001 – 0.008
Ti or Nb	0.02 – 0.3 Ti 0.01 – 0.5 Nb	≤ 0.2 Ti ≤ 0.2 Nb	0.02 – 0.2 Ti 0.01 – 0.2 Nb
Cu or Ni	0.2 – 1.8 Cu 0.1 – 2.0 Ni	0.5 – 3.0 Cu ≤ 2.0 Ni	0.5 – 1.8 Cu 0.1 – 2.0 Ni
Mo, B, or Ca	0.05 – 0.5 Mo 0.0002 – 0.006 B 0.0005 – 0.005 Ca	≤ 2.0 Mo --- B --- Ca	0.05 – 0.5 Mo --- B --- Ca
Fe + impurities	Balance	Balance	Balance

Furthermore, Matsuoka et al. teach specific examples of stainless steel sheets that are within the instant claimed ranges in Table 1 Alloy D and Table 4 Alloy L.

In regards to instant claims 1 and 2, Matsuoka et al. also disclose that oxides of Si and Mn on the steel sheet surface should be removed in order to improve the platability of the sheet (p. 18 paragraph [0313]). Although Matsuoka et al. do not specifically teach that the oxides on the steel sheet surface have, by mass %, an Si concentration of 3.5% or less and an Mn concentration of 3.5% or less, it would have been obvious to one of ordinary skill in the art at the time the invention was made to remove or greatly reduce the oxides of Si and Mn to a desired degree as claimed on the surface of the sheet of Matsuoka et al. in order to improve the platability of the sheet as taught by Matsuoka et al. The claim limitation in the instant claims 1 and 2 that the steel sheet is excellent in chemical convertibility does not have patentable weight because it merely states the purpose of the invention and does not contain a structural limitation.

See MPEP 2111.02 II. The additional limitations in claims 1 and 2 that the steel sheet is hot rolled and is produced through a hot rolling and pickling step are both process limitations and therefore do not have patentable weight. See MPEP 2113.

Since the claimed compositional ranges of instant claims 1 and 2 either overlap or are within the ranges disclosed by Matsuoka et al., a prima facie case of obviousness exists. See MPEP 2144.05. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the claimed steel alloy composition from the steel alloy disclosed by Matsuoka et al. because Matsuoka et al. teach the same utility (i.e. automobile body parts) in the whole disclosed range.

With respect to the instant claim 3, Matsuoka et al. do not teach the roughness or the number and size of pittings of the steel sheet. However, since the steel sheet of Matsuoka et al. has an overlapping composition and a similar process of making to the steel alloy of the instant claims, it would be expected that the steel sheet of Matsuoka et al. would have the recited roughness and number and size of pittings. See MPEP 2112 III and IV. The additional claim limitation of a hot rolled steel sheet excellent in chemical convertibility does not have patentable weight as discussed above.

Conclusion

8. No claim is allowed.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAITLIN FOGARTY whose telephone number is (571)270-3589. The examiner can normally be reached on Monday - Friday 8:00 AM - 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art
Unit 1793

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